



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,270	03/22/2004	Stephen Chen	BHT-3204-67	8962
7590 01/20/2006				
BRUCE H. TROXELL SUITE 1404 5205 LEESBURG PIKE FALLS CHURCH, VA 22041			EXAMINER VO, ANH T N	
			ART UNIT 2861	PAPER NUMBER

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/805,270

Applicant(s)

CHEN, STEPHEN

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

CLAIM REJECTIONS

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-5, 8-10, 12-13, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki (US Pat. 6,267,474) in view of Inoue et al. (Pub No.US: 2004/0090510).

Mochizuki discloses in Figures 2-3 an ink jet recording device comprising:

- a high capacity tank (12), an ink cartridge (50) and a duct (16) bridging the high capacity tank (12) and the ink cartridge (50), wherein:
- the high capacity tank (12) includes a closed container (40) for holding ink that has an air intake device (35) (Figure 3);
- the ink cartridge (50) is mountable in an ink cartridge housing (54) of an inkjet printer and includes an ink chamber which has a duct connector (51) extending from one side for connecting one end of the duct (16), the ink cartridge (50) further has an ink outflow device (52) on a lower side corresponding to a nozzle (4) of the inkjet printer to allow the ink to flow out;
- the duct (16) is a hollow tube.
- wherein the air intake device (35) is an air inlet located on the top end of the high capacity tank

Art Unit: 2861

(12) (Figure 3);

- wherein the closed container (40) is housed in an outer casing (12) (Figure 3); and
- wherein the imitated outer cartridge (9) has a plurality of core troughs for housing ink cartridges (12, 13, 14, 15) of multiple colors (Figure 2).

However, Mochizuki does not disclose that the high capacity tank includes a check valve which allows the ink to flow in one direction; wherein the air intake device is a check valve located in a first dock cavity on one side of the bottom of the closed container; and wherein the check valve is located in a second dock cavity on another side of the bottom of the closed container.

Nevertheless, Inoue et al disclose in Figures 4 and 6-7 a printing apparatus comprising:

- the high capacity tank (4b) includes a closed container (56) for holding ink that has an air intake device (53) and a check valve (a ball and a spring, both are close by an element 65) which allows the ink to flow in one direction (Figures 6-7);
- wherein the air intake device (53) is a check valve located in a first dock cavity on one side of the bottom of the closed container (56) (Figures 6-7); and
- wherein the check valve (a ball and a spring, both are close by an element 65) is located in a second dock cavity on another side of the bottom of the closed container (4b) (Figures 6-7).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Inoue et al. into the Mochizuki et al. ink jet recording device for the purpose of providing a check valve for an ink cartridge to control an ink supply to other ink container.

Claims 3 and 11 are rejected under 354 U.S.C. 103(a) as being unpatentable over Mochizuki (US Pat. 6,267,474) in view of Slotto et al. (US Pat. 6,860,59).

Mochizuki discloses the basic features of the claimed invention were stated above but does not disclose that the check valve has an outlet end which is coupled with another duct connector to connect another end of the duct.

Slotto et al. disclose in Figure 4 an ink container (53) of an ink jet printing apparatus comprising the check valve (57) that has an outlet end which is coupled with another duct connector (not shown) to connect another end of the duct (55).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Slotto et al. into the Mochizuki et al. ink jet recording device for the purpose of providing a check valve for an ink cartridge to allow ink to flow in one-way direction.

Claims 6-7 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki (US Pat. 6,267,474) in view of Seino et al. (US Pat. 6,554,412).

Mochizuki discloses the basic features of the claimed invention were stated above but does not disclose that the ink outflow device is a check valve and the ink outflow device has an outlet which is sealed by a membrane.

Seino et al. disclose in Figures 3A-3B an ink cartridge (1) comprising the ink outflow device (4) that is a check valve (48, 49) and the ink outflow device (4) has an outlet which is sealed by a membrane (7).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Seino et al. into the Mochizuki et al. ink jet recording device for the purpose of providing a check valve for an ink cartridge to control an ink supply to a print head and a seal material for sealing an ink outlet.

Citation of Pertinent Prior Art

Art Unit: 2861

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These prior art references (US Pat. 6,281,916; US Pat. 6,663,233; US Pat. 6,830,322; US Pat. 6,837,575; US Pat. 6,929,357; US Pat. 6,969,161) cited in the PTO 892 form show an ink jet printer, which is deemed to be relevant to the present invention. These references should be reviewed.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262.

The examiner can normally be reached on Tuesday to Friday from 8:00 A.M. to 6:00 P.M.

The fax number of this Group 2800 is (703) 872-9306.

A handwritten signature in black ink, appearing to be 'Anh T.N. Vo', with a long horizontal flourish extending to the right.

ANH T.N. VO
PRIMARY EXAMINER

January 19, 2004